



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/506,443	02/18/00	KAWAZURA	P21-9056

IM22/1019
NIKAIDO MARMELESTEIN MURRAY & ORAM LLP
1050 CONNECTICUT AVENUE, N.W.
SUITE 600
WASHINGTON DC 20036-5339

EXAMINER

MULLIS, J

ART UNIT PAPER NUMBER

1711

DATE MAILED: 10/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/506,443

Applicant(s)

KAWAZURA ET AL.

Examiner

Jeffrey C. Mullis

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit 1711

Claims 1-17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claim 14 is unclear in that this claim recites "a polymer (alpha) compatible with the block (a), and a polymer (beta)" . . . "and/or a mixture of polymer (alpha) and the polymer (beta)" and therefore is contradictory in that the claim recites that polymer alpha and polymer beta are present and simultaneously recite that these materials may alternatively be present as a mixture and thus imply that a mixture need not be present.

The quantity " $Mw_{30}(A)$ " is undefined. Furthermore, the definition for the term " $Mw_{30}(a)$ " makes no sense since it is said that the molecular weight is determined by GPC and that a is a block. Since the blocks are attached to each other, no determination by methods such as GPC could be made.

Claims 1-17 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' newly inserted definition of " $Mw_{30}(a)$ " is new matter since this definition was not present in the specification as filed.

Art Unit 1711

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawauzura et al. (USP 5,679,744).

See the previous Office action at page 4 line 1 et seq.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zanzig et al., newly cited by applicants.

Zanzig et al. disclose a composition containing a blend of polyisoprene and polybutadiene to which an isoprene butadiene block copolymer is added as compatibilizer. Note the Abstract.

Art Unit 1711

Note the last paragraph on page 538 which discloses that the block copolymers are made by butyl lithium catalyzed polymerization of isoprene and butadiene. Note that the block copolymers have polydispersities which are in all cases much more narrow than that of the natural rubber and polybutadiene. Since the natural rubber and polybutadiene are disclosed to be incompatible and since natural rubber is essentially polyisoprene, it is presumed that the polyisoprene and polybutadiene blocks of the block copolymer are incompatible with each other and compatible with the corresponding rubbers. Since the molecular weights of the block copolymers are significantly higher than the rubbers which they are compatibilizing and furthermore have narrower polydispersities than the rubbers which they are compatibilizing, applicants' ratio would be far less than 1.2 as required by the claims. With regard to those claims which appear possibly to require additional polymers besides the block copolymer in two rubbers, it is known in the art that a small amount of homopolymer is generated during alkyl lithium polymerizations of diene monomers due to unwanted termination of the lithium chain and living polymer and thus the limitations of such claims would be met.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties

Art Unit 1711

which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Applicants' arguments filed 8-6-01 have been fully considered but they are not deemed to be persuasive.

Applicants' remarks regarding the previous rejection under 35 U.S.C. § 112 second paragraph are moot since this rejection has been withdrawn.

With regard to the rejection under 35 U.S.C. § 102/103, applicants argue that the characteristics recited by the equations in their claims are not met by the application. In particular applicants argue that sufficient detail is present in order that any inherency argument could be made. The Examiner does not agree with this since patentees clearly disclose that their block copolymers are made by alkyl lithium polymerization followed by coupling with tin compounds, a method known to yield mixtures of coupled block copolymers and uncoupled polymers. Since the coupled block copolymers would be of higher molecular weight than the uncoupled units from which they are formed, applicants' ratio would be less than 1.0 as required by the claims which recite 1.2. It is noted that the uncoupled portion of the material of patentees is embraced by either of applicants' polymers alpha or beta the limitations of the claims are met.

Art Unit 1711

Applicants argue unexpected results; however unexpected results are immaterial to anticipation.

The above newly cited reference was cited by applicants after the payment of a 1.17P fee. Therefore this Office action is being made FINAL, MPEP § 609.

Applicants' amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Serial No. 09/506,443

-7-

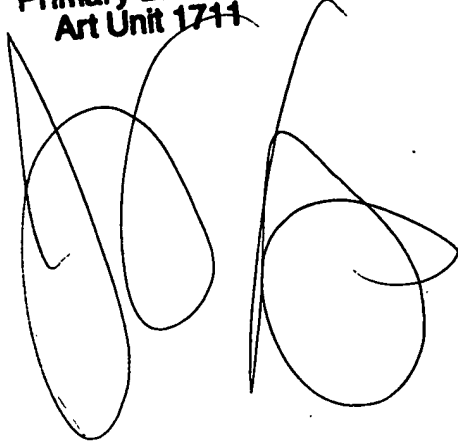
Art Unit 1711

Any inquiry concerning this communication should be directed to Jeffrey Mullis at telephone number (703) 308-2820.

J. Mullis:cdc

October 17, 2001

**Jeffrey Mullis
Primary Examiner
Art Unit 1711**

A large, stylized handwritten signature in black ink, consisting of several loops and a long vertical stroke on the left.